

REMARKS

Status of claims

Claims 1-24 are pending.

Remarks

The Examiner has rejected claims 1-24 under 35 U.S.C. § 102 as being anticipated by Urist, US 4,294,753 (“Urist”), alleging that Urist, at col. 3, lines 9-12, teaches the isolation of BMP from a solution containing HCl and minerals evolved from bone tissue. Applicants respectfully traverse this rejection.

Claims 1-24 all require a “mineral-containing acid supernatant” or “mineral-containing supernatant.” As described at p. 21, lines 15-18 of the present specification (Example 6) a mineral-containing supernatant includes *calcium ions . . . and bone proteins* in an acidic solution (see also p. 6, lines 21-23). According to the claimed methods, the mineral-containing supernatant is separated from demineralized bone tissue and osteogenic proteins are extracted therefrom.

Applicants acknowledge that a solution simultaneously containing minerals and bone proteins may theoretically exist within the dialysis sac of Urist. However, even were such a solution demonstrated to exist, it would be only transitorily present in the Urist process. Most importantly though, Urist does not teach separating such a solution from demineralized bone tissue. Instead, Urist teaches complete removal of minerals (i.e., “*removing the acid soluble calcium phosphate*” to create a solution “*free of calcium ion*”) from the dialysis sac solution to leave a “matrix-supernatant HCl” (see col. 5, lines 15-25). As this removal takes place while the solution is combined with demineralized bone tissue, there is no “mineral-containing

supernatant” to separate from the demineralized bone tissue. Moreover, even after “demineralization is complete,” the combined matrix-supernatant HCl, while still contained in the dialysis sac, is further washed prior to ultimately segregating the solid matrix material from the HCl solution by filtration (see col. 5, lines 26-36). Any further processing by Urist of the HCl solution containing bone protein takes place well after removal of any minerals and therefore does not involve a “mineral-containing supernatant.”

For at least the reasons noted above, because Urist does not teach every element of any of the pending claims, claims 1-24 are not anticipated thereby.

Respectfully submitted,

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